This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-27: (Cancelled)

(Currently Amended): A method of screening for a compound that increases activity of 28.

an a human Sp1 or B segment-binding β_3 -adrenergic receptor (β_3 -AR) trans-activating factor in

human mammalian cells, which method comprises:

contacting mammalian cells capable of producing the Sp1 or B segment-(a)

binding β_3 -AR trans-activating factor with a test compound; and

detecting an increase in a level of activity of the Sp1 or B segment-(b)

binding β_3 -AR trans-activating factor,

wherein the increase in the level of activity of the Sp1 or B segment-binding β_3 -AR trans-

activating factor results in an increase in the level of β_3 -AR gene product relative to a level of

expression prior to contact with the test compound.

(Currently Amended): A method of screening for a compound that increases activity of 29.

a human β_3 -adrenergic receptor (β_3 -AR) trans-activating factor in human mammalian cells,

which method comprises:

contacting mammalian cells capable of producing the β_3 -AR trans-(a)

activating factor with a test compound; and

(b) detecting an increase in a level of activity of the β_3 -AR trans-activating

factor, wherein the increase in the level of activity of the β_3 -AR trans-activating factor is

detected by detecting an increase in the level of expression of a reporter gene operatively

associated with an isolated nucleic acid having a nucleotide sequence GCCTCTGGGGAG

(SEQ ID NO:1) relative to a level of expression prior to contact with the test compound.

30. (Previously Presented): A method according to claim 28, wherein the increase in the

level of activity of the β_3 -AR trans-activating factor is detected by detecting an increase in the

amount of β_3 -AR trans-activating factor present in the cells after contacting them with the test

compound relative to the amount present prior to contact with the test compound.

31. (Currently Amended): A method according to claim 28, wherein the cells do not

endogenously express, or express at very low level, β_3 -AR.

32. (Original): A method according to claim 31, wherein the cells are selected from the

group consisting of HeLa cells, CV-1 cells, and WAT cells.

33. (Currently Amended): A method of screening for a compound that inhibits activity of

an a human Sp1 or B segment-binding β_3 -adrenergic receptor (β_3 -AR) trans-activating factor in

human mammalian cells, which method comprises:

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contacting mammalian cells capable of producing the Sp1 or B segment-(a)

binding β_3 -AR trans-activating factor with a test compound; and

(b) detecting a decrease in a level of activity of the Sp1 or B segment-

binding β_3 -AR *trans*-activating factor,

wherein the decrease in the level of activity of the Sp1 or B segment-binding β_3 -AR trans-

activating factor results in a decrease in the level of β_3 -AR gene product relative to a level of

expression prior to contact with the test compound.

34. (Currently Amended): A method of screening for a compound that inhibits activity of a

human β_3 -adrenergic receptor (β_3 -AR) trans-activating factor in human mammalian cells,

which method comprises:

contacting mammalian cells capable of producing the \(\beta_3\)-AR trans-(a)

activating factor with a test compound; and

detecting a decrease in a level of activity of the β_3 -AR trans-activating (b)

factor,

wherein the decrease in the level of activity of the β_3 -AR trans-activating factor is detected by

detecting a decrease in the level of expression of a reporter gene operatively associated with an

isolated nucleic acid having a nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1)

relative to a level of expression prior to contact with the test compound.

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(Original): A method according to claim 33, wherein the decrease in the level of 35.

activity of the β_3 -AR trans-activating factor is detected by detecting a decrease in the amount of

 β_3 -AR trans-activating factor present in the cells after contacting them with the test compound

relative to the amount present prior to contact with the test compound.

(Original): A method according to claim 33, wherein the cells endogenously express β_3 -36.

AR.

37. (Original): A method according to claim 36, wherein the cells are selected from the

group consisting of neuroblastoma and BAT cells.

(Currently Amended): A method of screening for a compound that increases activity of 38.

a human β_3 -adrenergic receptor (β_3 -AR) trans-activating factor in human mammalian cells,

which method comprises:

contacting mammalian cells capable of producing the β₃-AR trans-(a)

activating factor with a test compound; and

detecting an increase in a level of activity of the β_3 -AR trans-activating (b)

factor, wherein the level of activity of the β_3 -AR trans-activating factor is detected by an

increase in the level of expression of a reporter gene operatively associated with an isolated

nucleic acid selected from the group consisting of:

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(i) about a 7 kb genomic DNA 5' flanking region of a β_3 -AR

transcription start site,

(ii) a deletion construct of a 7 kb genomic DNA located upstream of a

 β_3 -AR transcription start site;

(iii) a nucleic acid comprising a nucleotide sequence that is greater than 80%

identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) located 5' to an Sp-1

binding site relative to a transcription start site; and

(iv) a nucleic acid comprising a heterologous coding sequence operatively

associated with a promoter and operatively associated with a nucleotide sequence that is greater

than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) in

proximity to an Sp-1 binding site, whereby expression of the heterologous protein is regulated

in a tissue specific manner.

39. (Currently Amended): A method of screening for a compound that decreases activity of

a human β_3 -adrenergic receptor (β_3 -AR) trans-activating factor in human mammalian cells,

which method comprises:

(a) contacting mammalian cells capable of producing the β_3 -AR trans-

activating factor with a test compound; and

(b) detecting a decrease in a level of activity of the β_3 -AR trans-activating

factor, wherein the level of activity of the β_3 -AR trans-activating factor is detected by a

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decrease in the level of expression of a reporter gene operatively associated with an isolated nucleic acid selected from the group consisting of:

(i) about a 7 kb genomic DNA 5' flanking region of a β_3 -AR

transcription start site,

(ii) a deletion construct of a 7 kb genomic DNA located upstream of a

 β_3 -AR transcription start site;

(iii) a nucleic acid comprising a nucleotide sequence that is greater than 80%

identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) located 5' to an Sp-1

binding site relative to a transcription start site; and

(iv) a nucleic acid comprising a heterologous coding sequence operatively

associated with a promoter and operatively associated with a nucleotide sequence that is greater

than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) in

proximity to an Sp-1 binding site, whereby expression of the heterologous protein is regulated

in a tissue specific manner.

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